



SEQUENCE LISTING

COPY OF PAPERS
ORIGINALLY FILED

<110> Rothschild, Max
Larsen, Niels
Kim, Kwan

<120> Melanocortin-4 Receptor Gene and Use as a Genetic Marker for Fat Content,
Weight Gain, and/or Feed Consumption in Animals

<130> ISURF 2413

<140> 09/380,419

<141> 2000-07-24

<160> 26

<170> PatentIn version 3.0

<210> 1

<211> 746

<212> DNA

<213> Sus scrofa

<220>

<221> variation

<222> (678)..(678)

<223> G/A

<400> 1

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ccttcaaaga gatcatctgt tgctat	746

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 <212> DNA
 <213> Homo sapiens

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 ttatcatcac cctattaaac agtacagata cggatgcaca gagtttcaca gtgaatattg 180
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<220>
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 <223> "X" can be any amino acid

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 Leu His Ser Pro Met Tyr Phe Phe Ile Cys Ser Leu Ala Val Ala Asp
 35 40 45
 Met Leu Val Ser Val Ser Asn Gly Ser Glu Thr Ile Ile Ile Thr Leu

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Leu Asn Ser Thr Asp Thr Asp Ala Gln Ser Phe Thr Val Asn Ile Asp 65 70 75 80		
Asn Val Ile Asp Ser Val Ile Cys Ser Ser Leu Leu Ala Ser Ile Cys 85 90 95		
Ser Leu Leu Ser Ile Ala Val Asp Arg Tyr Phe Thr Ile Phe Tyr Ala 100 105 110		
Leu Gln Tyr His Asn Ile Met Thr Val Lys Arg Val Gly Ile Ser Ile 115 120 125		
Ser Cys Ile Trp Ala Ala Cys Thr Val Ser Gly Ile Leu Phe Ile Ile 130 135 140		
Tyr Ser Asp Ser Ser Ala Val Ile Ile Cys Leu Ile Thr Met Phe Phe 145 150 155 160		
Thr Met Leu Ala Leu Met Ala Ser Leu Tyr Val His Met Phe Leu Met 165 170 175		
Ala Arg Leu His Ile Lys Arg Ile Ala Val Leu Pro Gly Thr Gly Ala 180 185 190		
Ile Arg Gln Gly Ala Asn Met Lys Gly Ala Ile Thr Leu Thr Ile Leu 195 200 205		
Ile Gly Val Phe Val Val Cys Trp Ala Pro Phe Phe Leu His Leu Ile 210 215 220		
Phe Tyr Ile Ser Cys Pro Gln Asn Pro Tyr Cys Val Cys Phe Met Ser 225 230 235 240		
His Phe Asn Leu Tyr Leu Ile Leu Ile Met Cys Asn Ser Ile Ile Asp 245 250 255		
Pro Leu Ile Tyr Ala Leu Arg Ser Gln Glu Leu Arg Lys Thr Phe Lys 260 265 270		
Glu Ile Ile Cys Cys Tyr Pro Leu Gly Gly Leu Cys Asp Leu Ser Ser 275 280 285		
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Asp Glu Asn Thr Ile Ala Leu 305 310		

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<400> 4

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 35 40 45
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 50 55 60
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 65 70 75 80
 Tyr Ala Leu Gln Tyr His Asn Ile Met Thr Val Lys Arg Val Gly Ile
 85 90 95
 Ile Ile Ser Cys Ile Trp Ala Val Cys Thr Val Ser Gly Val Leu Phe
 100 105 110
 Ile Ile Tyr Ser Asp Ser Ser Ala Val Ile Ile Cys Leu Ile Thr Val
 115 120 125
 Phe Phe Thr Met Leu Ala Leu Met Ala Ser Leu Tyr Val His Met Phe
 130 135 140
 Leu Met Ala Arg Leu His Ile Lys Arg Ile Ala Val Leu Pro Gly Thr
 145 150 155 160
 Gly Thr Ile Arg Gln Gly Ala Asn Met Lys Gly Ala Ile Thr Leu Thr
 165 170 175
 Ile Leu Ile Gly Val Phe Val Val Cys Trp Ala Pro Phe Phe Leu His
 180 185 190
 Leu Ile Phe Tyr Ile Ser Cys Pro Gln Asn Pro Tyr Cys Val Cys Phe
 195 200 205
 Met Ser His Phe Asn Leu Tyr Leu Ile Leu Ile Met Cys Asn Ser Ile
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 225 230 235 240
 Phe Lys Glu Ile Ile Cys Cys Tyr
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<400> 7
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 <212> DNA
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<400> 8
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<210> 9
 <211> 20
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<400> 9
 taccctgacc atcttgattg 20

<210> 10
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<400> 10
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Ile Asp Pro Leu Ile Tyr Ala Leu
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<212> PRT
<213> Homo sapiens

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Ile Asp Pro Leu Ile Tyr Ala Leu
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<210> 13
<211> 24
<212> PRT
<213> Rattus norvegicus

<400> 13

Met Ser His Phe Asn Leu Tyr Leu Ile Leu Ile Met Cys Asn Ala Val
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Ile Asp Pro Leu Ile Tyr Ala Leu
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<213> Sheep

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<212> PRT
<213> bovine

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Ile Asp Pro Leu Ile Tyr Ala
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<212> PRT
<213> bovine

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Met Ser Leu Phe Gln Val Asn Gly Val Leu Ile Met Cys Asn Ala Ile
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Ile Asp Pro Phe Ile Tyr Ala Leu
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<210> 17

<211> 22

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<213> Homo sapiens

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Asp Pro Leu Ile Tyr Ala
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<210> 18

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<212> PRT

<213> Mouse

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Ala His Phe Asn Thr Tyr Leu Val Leu Ile Met Cys Asn Ser Val Ile
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<210> 19

<211> 23

<212> PRT

<213> Homo sapiens

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Met Asp Pro Leu Ile Tyr Ala
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<211> 22

<212> PRT

<213> Homo sapiens

<400> 20

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Asp Pro Leu Ile Tyr Ala
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<210> 21
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<212> PRT
<213> bovine

<400> 21

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Met Asn Pro Ile Ile Tyr Ser Tyr Arg
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<210> 22
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<213> Homo sapiens

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Ser Cys Arg

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<212> PRT
<213> Homo sapiens

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Pro Leu Ile Tyr Ala Leu
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<213> Homo sapiens

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Val Ile Tyr Thr Ile
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<210> 25

<211> 22
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<213> Rattus norvegicus

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Ile Leu Tyr Ala Phe Leu
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<210> 26
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